



BULLETIN

Volume 9, Issue 4

Providing for Michigan's Safety in the Built Environment

August 2004

DIRECTOR'S COLUMN

Henry L. Green

The Bureau of Construction Codes and Fire Safety welcomes the State Fire Marshal. Andrew Neumann was appointed State Fire Marshal on July 5, 2004. Andy brings considerable experience to the Bureau and will be a welcome addition to the Construction and Fire Safety Team.

During the next several weeks, Andy will be communicating with both fire service agencies and code offices to become familiar with the issues we are currently facing. As he visits with you and your organization, please welcome him and provide your comments openly on what you have experienced and hope we will achieve in developing a concise and effective management team for the construction codes and fire safety programs.

Over the past several months, we have experienced significant growth and still have some issues to work through. In December, the transfer of the Office of the State Fire Marshal was completed. Since that time, we have evaluated program needs, assessed the future goals for growth, and sought out efficiencies in our delivery of program services that would not diminish the effectiveness or value of the programs.

As I noted in my February column, the consolidation of these programs will provide more uniformity in the application of standards. We hope to achieve a consistent level of safety throughout the state in all areas of our built environment.

Now that another piece of the management team is in place, we hope to accelerate our activities and achieve the goals and objectives identified as a result of combining these programs.

Proposed Changes to 1986 PA 54 Fire Inspector Certification

*by Michael D. O'Brian, Lieutenant
Michigan Fire Service Inspectors Society*

Over the past year, the Michigan Fire Inspectors Society has worked through the committee process in an attempt to evaluate the current certification process for fire inspectors within the State of Michigan. The committee will be recommending that the certified fire inspector be involved in the construction process by working with other registered code officials. The intent of the proposal is to give communities options for code enforcement and options on how fire inspectors are certified. This is truly a great stride for the code enforcement community.

The committee is working closely with the staff of the Bureau of Construction Codes and Fire Safety and would like input from the code official on this proposal. Code officials are being asked to please review the proposal and provide the committee with their comments or concerns. A summary of proposed changes is located at the Michigan Fire Inspectors web site at www.mfis.org.

Over the next several months, committee members would like to meet with various groups and associations. To schedule a meeting, please contact a committee chair person. If you have comments, questions or concerns please call one of the listed committee members.

Boilers in Apartments, Condominiums and Town Homes.

*by Robert Aben, Chief
Boiler Division*

The boiler act, 1965 PA 290, addresses exemptions under section 7 (408.757) and includes the following statements:

This act shall not apply to:

(a) Boilers under federal control.

(d) Steam or vapor boilers carrying a pressure of not more than 15 p.s.i.g. which are located in **a private residence or in an apartment building** with a capacity of less than 6 families except that installers and repairers of such boilers shall be licensed as provided in section 13.

(e) Hot water boilers operated at a pressure not exceeding 160 p.s.i.g. or a temperature not exceeding 250 degrees Fahrenheit that are located in **a private residence or in an apartment building** with a capacity of less than six families except that installers and repairers of such boilers shall be licensed as provided in section 13.

These statements do not exempt housing under the federal HUD program or the state MSHDA programs. Boilers under federal control mean boilers owned and operated by the federal government.

Town homes and condominiums as part of a single structure containing 6 or more units under a single roof are also not exempt.

Licensees should contact the Boiler Division at 517/241-9334 regarding a locations exempt status rather than relying on information from location owners.

Connection of Metal Plated Wood Roof Trusses to Bearing Walls and Beams

by Larry Lehman, Chief
Building Division

R802.10.5 of the 2003 *Michigan Residential Code* (MRC) specifies that "trusses shall be connected to wall plates by the use of approved connectors having a resistance to uplift of not less than 175 pounds and shall be installed in accordance with the manufacturer's specifications." This is a new requirement to the MRC in this code cycle. The code was changed because trusses are commonly damaged from the standard toe-nail connection and, if damaged enough, they may result in a zero uplift capacity and have improper bearing area. R802.10.5 specifies the minimum connection when the wind uplift pressures per Table R301.2(2) adjusted per Table R301.2(3) are less than 20 psf.

In accordance with ANSI/TPI/WTCA 4-2002, *National Standard and Recommended Guidelines on Responsibilities for Construction Using Metal Plate Connected Wood Trusses*, it is not the responsibility of the truss manufacturer to specify the truss connections. These connections shall be specified on the building design documents. Therefore, it is the building designer's responsibility to specify what connector is required. The building designer must account for uplift forces as well as in-plane

and out of plane shear loads on the connectors. The truss manufacturer is only responsible for the truss to truss connections.

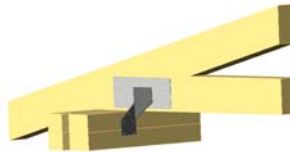


Figure 1: Example of Truss Connector

The Wood Truss Council of Michigan also recommends the use of manufactured steel truss connectors in accordance with R802.10.5 of the MRC for the following reasons. First, it will greatly reduce the risk of damage from toe-nailing. If the truss lumber splits from toe-nailing, there is no longer any uplift capacity in the connection and the bearing area for the truss is reduced by the lumber that split off. Second, if the connectors are installed on the interior side of the wall, the connection is easily visible. This allows the building inspector an easy way to verify the truss to wall or truss to

beam connection. The result is less concern of a proper installation and easy verification of the connection.

According to R802.11, the building designer must account for wind uplift at the truss to wall connection if the wind pressures per Table R301.2(2) adjusted per Table R301.2(3) are greater than or equal to 20 psf. This must be checked as well as checking the uplift reaction on the truss even if the wind uplift pressures are less than 20 psf because the uplift reaction may exceed the minimum 175 lb. connection. Special attention must be given to girder truss uplift reactions, since they often exceed the minimum 175 lb. requirement.

The building design shall also provide a direct load path for all uplift forces. These load paths shall transfer the uplift force to the foundation or other structural elements capable of resisting the uplift forces with the appropriate factor of safety in accordance with Chapter 16 of the 2003 *Michigan Building Code*.

Questions may be directed to the Building Division at 517/241-9317.

License Exam Schedule

EXAMINATION	DATE	LOCATION	DEADLINE
Boiler Installer & Repairer	September 1 & 2	Okemos	August 1
Journeyman Electrician	September 22	Escanaba	August 24
Master Electrician	September 23	Escanaba	August 25
Elevator Journeyperson	August 10	Okemos	July 20
Elevator Contractor & General COC	September 17	Okemos	August 27
Mechanical Contractor	August 4	Escanaba	July 7
Master and Journey Plumbers			
Future examinations to be determined			
<i>Dates and locations are subject to change.</i>			

State offices will be closed in observance of the following holidays:

September 6 - Labor Day
November 11 - Veterans Day
November 25 & 26 - Thanksgiving
December 23 & 24 - Christmas
December 30 & 31 - New Year

Plumbing Division Update

by Robert G. Konyndyk, Chief
Plumbing Division

The State Plumbing Board (SPB) recently expressed concerns related to apprentice registration, med gas inspections, testing updates, and code update correspondence classes.

The State Plumbing Act mandated apprentice registration in order to apply for the journey examination. The State Plumbing Board has discussed setting a future date where all applicants must have been issued a registration 3 years prior in order to take the journey test. Test applicants not having a registration card issued three years prior to application will not be allowed to take the examination. Remember, an apprentice registration card issued three years prior to the journey application will be implemented soon.

The Michigan Plumbing Code, Chapter 12 requires medical gas piping systems to conform to NFPA 99C, the 1999 standard edition. The State Plumbing Act mandates a plumbing permit obtained by a plumbing contractor for these installations. The SPB's position requires installers to be certified in brazing and installation qualified by class instruction on the standard's requirements. Installers and inspectors shall have adequate training to meet enforcement needs for large facilities as well as dental clinics.

Journey, master, and contractor examination candidates are reminded that the September tests will reference the 2003 Michigan Plumbing Code. Examination updates have consistently taken place two tests after the code change to accommodate instruction and material updates.

The bureau has identified several plumbing code update class providers, on the Bureau's web site www.michigan.gov/bccfs. The SPB members are encouraging greater participation in the greater Detroit area as well as correspondence course applicants.

Questions may be directed to Robert Konyndyk, Chief, Plumbing Division, 517/241-9330.

2005 Higgins Lake Training Update

by Scott Fisher, Director
Office of Local Government & Consumer Services

The BCCFS will again be offering state sponsored seminars at the MacMullan Conference Center (Higgins Lake). Interested inspectors should take note that for the code cycle ending 2006, the content of some of the Bureau's training programs may not change from previous years. The intent is to make available the Bureau sponsored training programs to as many different inspectors as possible from around the state. The Bureau has found its programs to be of considerable interest as indicated by early reservation of the available training dates, especially by newly registered inspectors. Therefore, it is suggested that you contact the division sponsoring the program regarding content to avoid duplication of courses attended. If the seminar date of your choice for the calendar year is full, the same training programs may be offered in 2006. The following dates have been scheduled for 2005:

Building Inspector Training Program
(Two-Week Program)

1st week: December 5 – 9, 2005

2nd week: January 23 – 27, 2006

Electrical Inspector Training Programs
February 28 – March 2, 2005
October 17 – 19, 2005

Mechanical Inspector Training Programs
February 16 – 18, 2005
September 12 – 14, 2005

Plumbing Inspector Training Programs
February 7 – 9, 2005
October 10 – 12, 2005

Each seminar will accommodate 35 individuals. Please contact the Office of Local Government & Consumer Services at (517) 241-9347 to reserve a place for the seminar of your choice. As the scheduled dates approach, confirmation of your reservation will be provided along with an agenda and payment information.

Questions may be directed to the Office of Local Government and Consumer Services at 517/241-9347.

Flash Protection

by Virgil Monroe, Acting Chief
Electrical Division

There have been questions regarding requirements in the 2002 Michigan Electrical Code on flash protection for personnel.

Article 110.16 of the 2002 Michigan Electrical Code defines the requirements for flash protection.

It reads, **“Switchboards, panelboards, industrial control panels, and motor control centers that are in other than dwelling occupancies and are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential electric arc flash hazards. The marking shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment.”**

Therefore, the Michigan Electrical Code requires the installation of warning signs on the above listed equipment if it requires **examination, adjustment, servicing, or maintenance** while energized. Article 110.16 does not stipulate a size requirement for these warning signs, nor does it require protective clothing. It only stipulates that warning signs must be installed. **FPN No. 2** gives the **ANSI Standard Z535.4-1998, Product Safety Signs and Labels** as a guideline for the design of these safety signs. The 2002 Electrical Code Rules, Part 8, Rule 801 states, **“Fine print notes contained within the body of the code are not adopted as part of the code.”** Although, fine print notes are not enforceable, **ANSI Standard Z535.4-1998** will give a guideline on what could be required for warning signs.

Questions may be directed to the Electrical Division at 517/241-9320.



Accessible Means of Egress vs. Accessible Route

by Irvin J. Poke, Chief
Plan Review Division

The question which has arisen is, does Michigan Building Code (MBC), 2000 [2003] edition, section 3408.5 [3409.5] exception 2 allow a building, facility, or element that has undergone a change in occupancy group and/or interior alterations, to be exempt from the requirement to provide an accessible entrance as required in Chapter 11, Section 1105.1 or any other provisions in chapter 11? The answer is no.

MBC section 3408.5, [3409.5] exception 2 only exempts an existing building from an accessible means of egress as prescribed in MBC, Chapter 10. A route and accessible entrance prescribed in MBC, Sections 1104 and 1105 are different from an accessible means of egress as prescribed in Section 1003.2.13 [1007.1]. In a single story building with 1 floor level an accessible entrance and route may also be an accessible means of egress.

However, in multiple level buildings the requirements for the elements are generally mutually exclusive. Therefore, a building official that does not require an accessible entrance and route for a change in use based on Section 3408.5 [3409.5]; exception 2 is improperly applying the code.

Additionally 1966 PA 1 sections 2(2)(a) and (b) read as follow:

(a) If the change in use group or occupancy load, or alteration, involves less than 50% of the floor area of the public facility or facility used by the public which can be used by the public or employees, only the area affected, and areas necessary to provide a continuous and unobstructed route of travel to and from the affected areas from and including the nearest entrance, shall be required to meet the barrier free design requirements of the state construction code.

(b) If the change in use group or occupancy load, or alteration, involves 50% or more of the floor area of the public facility or facility used by the public which can be occupied by the public or employees, the entire public facility or used by the public shall meet the barrier free design requirements of the state construction code.

As noted above, the Barrier Free Design law requires an accessible route when any of the conditions listed occur. If the route is not provided not only is it a violation of code but also a violation of law.

If there are questions regarding the issues discussed above, contact the Plan Review Division at (517) 241-9328.

Hoistway Screening

by Calvin W. Rogler, Chief
Elevator Division

The Elevator Safety Division has received several questions from elevator contractors and journey persons regarding the requirements for hoistway screening. When an elevator is operating in a multiple hoistway, and work is to be performed in an adjacent portion of that multiple hoistway, the Elevator Safety Division has always required that hoistways be fully separated. This applies both during new construction when a car has been turned over, and during alteration projects that require work to be performed in one hoistway while the car is in use in the adjacent hoistway. We have always used the "Elevators Used for Construction" section of the American Society of Mechanical Engineers (ASME) A17.1 Safety Code for Elevators and Escalators regarding hoistway screening.

Section 5.10.1.1.1(c) of ASME A17.1-2000 states:

"Where the elevator is operating in a multiple hoistway, and work is to be

performed in an adjacent portion of that multiple hoistway, the construction elevators hoistway shall be fully separated. The material used for this separation shall

(1) be equal to or stronger than 1 mm (0.0437 in.) diameter wire;

(2) have openings not exceeding 25 mm (1 in.);

(3) be so supported and braced that when subjected to a pressure of 4.79 kPa (100 lbf/ft²) applied horizontally at any point, the deflection shall not exceed 25 mm (1 in.)."

Supporting this is an entry from the 2000 edition of the Elevator Industry Field Employees Safety Handbook, Section 8.3 Hoistway Screening that states:

"Where an elevator is operating in a multiple hoistway, and construction or modernization work is to be performed in an adjacent portion of that hoistway, that portion of the elevator's hoistway where the work is to be performed shall be fully separated. The material used for this

separation shall:

- be equal or stronger than 0.0437 in. (1.118 mm) dia. wire;
- have openings not exceeding 1 in. (25 mm);
- be so supported and braced so as not to defect into the code required running clearance of the adjacent car; and
- be in accordance with local code."

These requirements protect personnel in the adjacent hoistways while they are working and afford a means of protection to the occupants of the elevator. Screening used for separation may remain in place after the elevator is put back into service. However, the screening shall not restrict the use of any side emergency exits when provided. The original intent of the requirements is that the separation be removed once the elevator is put back into service.

Questions may be directed to the Elevator Division at 517/241-9337.

Michigan Fire Fighters Training Council

by Tony Sanfilippo, Deputy Director

MFFTC VIDEO LOAN POLICY

To enhance the delivery of fire training courses the Michigan Fire Fighters Training Council (MFFTC) established the video library in accordance with PA 291, part 29.369, section 9.

The video library is broken down into eight (8) different categories, FFI & II Basic, Apparatus, Arson Detection/Fire Investigation, Fire Officer, Hazardous Materials, Rescue, Suppression and Terrorism.

Priority scheduling of videos is given to requests for videotapes used with MFFTC registered training courses. To borrow a video for use with a registered course, the Course Manager must submit a completed **BCCFS-104 Video Schedule** along with an BCCFS-110 Course Application form.

Video requests not associated with a registered training course are restricted to Fire Department Training Officers registered with the MFFTC and certified instructors. To borrow a video other than for use with a registered course, the Fire Department Training Officer or MFFTC certified instructor must submit (at least **6 weeks prior** to use date) a completed

BCCFS-104 Video Schedule along with a written request on Fire Department letterhead indicating the purpose of the request.

Additional information, including the address for submittal, is located on the back of the BCCFS-104 Video Schedule. Because of the volume of requests for videos, telephone or walk-in requests will not be accepted.

Returning videos must be in the MFFTC office **WITHIN 7 DAYS** after scheduled use date. The only exception to this are the HazMat Operations 9 in 1 video (F-03), which must be received **WITHIN 21 DAYS** after scheduled use date.

Note: 1966 PA 291, part 29.369, Section 9, Subsection (3) allows the imposing of a reasonable fee for loss, damage, or late return of videotapes.

Videos **MUST** be returned United Parcel Service (UPS) for tracking purposes.

Exception: If you are unable to use UPS, you may return the videos US Mail (USPS) using Priority Mail with a Signature Confirmation (Note: A signature confirmation is not a tracking system; it only confirms receipt of the package). Please check the USPS web site at www.usps.gov for additional information.

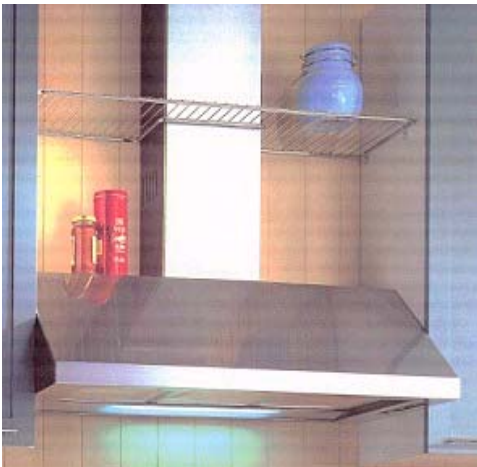
Please be certain to return videos in the correctly numbered shipping case. (i.e. video number must match number on shipping case and bar code label). For return address, simply peel off your address label to expose the MFFTC address. Do not tape over or cover the MFFTC return label or the video bar code on the shipping case.

When shipping back multiple videos please place them in a box. **"PLEASE DO NOT TAPE VIDEOS TOGETHER."** It damages the bar coding and slows down the check in process.

If you have questions or suggestions on how the video loan service might be improved, please contact the MFFTC at 517/322-5444.



Commercial Kitchen Hoods



by David Adams, Asst. Chief
Mechanical Division

Section 507.2 of the 2003 Michigan Mechanical Code states "A Type I or Type II hood shall be installed at or above all commercial cooking appliances in accordance with section 507.2.1 and 507.2.2. Where any cooking appliance under a single hood requires a Type I hood, a Type I hood shall be installed. Where a Type II hood is required, a Type I or Type II hood shall be installed."

Section 507.2.1 states "Type I hoods shall be installed where cooking appliances produce grease or smoke, such as occurs with griddles, fryers, broilers, ovens, ranges and wok ranges."

Section 507.2.2 states "Type II hoods shall be installed where cooking or dishwashing appliances produce heat or steam and do not produce grease or smoke such as steamers, kettles, pasta cookers, dishwashing machines and ovens.

Exceptions:

1. Under counter type commercial dishwashing machines
2. A type II hood is not required for dishwashers and potwashers that are provided with heat and water vapor exhaust systems that are supplied by the appliance manufacturer and are installed in accordance with the manufacturer's instructions.
3. Ovens used for re-heating foods previously cooked."

Questions may be directed to the Mechanical Division at 517/241-9325.

Land Division Act - Recent Michigan Supreme Court Opinion

by Maynard Dyer, Director
Office of Land Survey and Remonumentation

Martin v Beldean, 469 Mich. 541 (2004)
– Filed March 31, 2004

Case Summary:

Plaintiff lot owners (Martin) sought to have certain plat language removed or declared null and void. The Oakland County Circuit Court granted summary disposition for them, revised the plat language as requested, and granted them the exclusive right to the part of Outlot A described in their deed. Defendants (Beldean, et al), several of the other lot owners in the subdivision, appealed the trial court's order. The Michigan Court of Appeals affirmed. Defendants appealed.

The Michigan Court of Appeals held that §560.253(1) did not recognize private dedications. At issue in this case was whether a plat that was recorded in 1969 could contain dedications only to the public, or whether private dedications to an individual or to individuals could also be included and be effective. To answer this, the court had to construe §560.253(1), which was enacted as part of 1967 PA 288. The Michigan Supreme Court held:

given the express authorization for private dedications, gifts, and grants in §560.253(1), and the mention of dedications for private use in §560.202(1) and §560.204(1), and given that §560.253(1) authorized private dedications when marked and noted as a dedication in the plat, the statement in the plat, located under the paragraph entitled "Dedication," that Outlot A was reserved for the use of the lot owners was marked and noted as a dedication and thus constituted a private dedication that conveyed a fee simple to the donees; the private dedication of Outlot A was drafted in conformity with, and was expressly permitted by, the Land Division Act.

Outcome:

The Michigan Supreme Court reversed the judgments of the Michigan Court of Appeals and the Oakland County Circuit Court.

Significant findings set forth in this opinion are as follows:

- Private dedications in plats filed after the effective date of §560.253(1) (January

1, 1968) are expressly recognized and allowed under Michigan law.

- The exclusive means available when seeking to vacate, correct, or revise a dedication in a recorded plat is a lawsuit filed pursuant to §560.221 through §560.229.

- A private dedication made before 1967 PA 288 took effect conveyed an irrevocable easement, whereas §560.253(1) now indicates that a private dedication conveys a fee interest subject to the explanation set forth.

- Purchasers of parcels of property conveyed with reference to a recorded plat have the right to rely on the plat reference and are presumed to accept the benefits and any liabilities that may be associated with the private dedication.

Questions may be directed to the Office of Land Survey and Remonumentation at 517/241-6321.

Scheduled Board Meetings

<u>MEETING</u>	<u>DATE</u>	<u>TIME</u>	<u>LOCATION</u>
Barrier Free Design Board	September 10	9:30 a.m.	Okemos-Conf. Room 3
	November 12	9:30 a.m.	Okemos-Conf. Room 3
Board of Boiler Rules	September 7	9:00 a.m.	Okemos-Conf. Room 3
Construction Code Commission	September 1	9:30 a.m.	Okemos-Conf. Room 3
	November 3	9:30 a.m.	Okemos-Conf. Room 3
Electrical Administrative Board	October 1	9:30 a.m.	Okemos-Conf. Room 3
Elevator Safety Board	September 17	9:30 a.m.	Okemos-Conf. Room 3
	November 19	9:30 a.m.	Okemos-Conf. Room 3
Fire Fighters Training Council	August 11	10:00 a.m.	Okemos-Suite 116
	October 13	10:00 a.m.	Okemos-Suite. 116
Manufactured Housing Commission	August 4	10:00 a.m.	Okemos-Conf. Room 3
	September 22	10:00 a.m.	Okemos-Conf. Room 3
	November 10	10:00 a.m.	Okemos-Conf. Room 3
Board of Mechanical Rules	August 25	9:00 a.m.	Okemos-Conf. Room 3
	October 13	9:00 a.m.	Okemos-Conf. Room 3
State Fire Safety Board	September 23	1:00 p.m.	Okemos-Conf. Room 3
	October 28	1:00 p.m.	Okemos-Conf. Room 3
	November 18	1:00 p.m.	Okemos-Conf. Room 1
State Plumbing Board	October 27	10:00 a.m.	Okemos-Conf. Room 1
	November 30	10:00 a.m.	Okemos-Conf. Room 3

How to Contact the Bureau of Construction Codes & Fire Safety

Mailing Addresses:

P.O. Box 30254 (Codes: general correspondence)
 P.O. Box 30255 (Codes: permits, licenses, and other documents containing payment)
 P.O. Box 30704 (Office of Land Survey and Remonumentation)
 P.O. Box 30222 (Office of Local Government and Consumer Services)
 Lansing, Michigan 48909

Physical Addresses:

2501 Woodlake Circle, Okemos (Administration; Office of Administrative Services; Office of Management Services; Office of State Fire Marshal, Building Division; Electrical Division; Mechanical Division; Plan Review Division; and Plumbing Division)
6546 Mercantile Way, Lansing (Office of Local Government and Consumer Services; Office of Land Survey and Remonumentation; Boiler Division; and Elevator Safety Division)
7150 Harris Drive, Lansing (Michigan Fire Fighters Training Council)

Fax Numbers:

Administration, Office of the State Fire Marshal - (517) 241-9570 Plan Review - (517) 241-9308
 Codes - (517) 241-9308 Fire Fighters Training Council - (517) 322-6540
 Office of Land Survey and Remonumentation - (517) 241-6301 Office of Local Government and Consumer Services - (517) 241-6371

Telephone Numbers:

Administration	517/241-9302
Office of Administrative Services (OAS)	517/335-2972
Office of Management Services (OMS)	517/241-9313
Boiler Division	517/241-9334
Building Division	517/241-9317
Electrical Division	517/241-9320
Elevator Safety Division	517/241-9337
Fire Fighters Training Council	517/322-5444
Mechanical Division	517/241-9325
Office of Local Government and Consumer Services (OLGCS)	517/241-6321
Office of Land Survey and Remonumentation (OLSR)	517/241-6300
Office of the State Fire Marshal	517/241-9302
Plan Review Division	517/241-9328
Plumbing Division	517/241-9330

The *Bulletin* is a quarterly publication of the Bureau of Construction Codes & Fire Safety within the Michigan Department of Labor & Economic Growth.

Editor-in-Chief:

Henry L. Green

Editor:

Beth Hunter Aben

Bureau of
 Construction Codes &
 Fire Safety
 P.O. Box 30254
 Lansing, MI 48909

